

## ABSTRACT OF THE DISCLOSURE

A communication network control method for a communication network including a hub and a plurality of user nodes includes adjusting system parameters to maximize communication data rate and minimize bit error rate given current conditions of the wireless channel, current loading of the network, and user constraints. In particular, the method includes transmitting a first and second frame with first and second control information from the hub to each user node, and transmitting a first and second respective data burst from each of the user nodes to the hub according to the first and second control information. The first data burst from each user node arrives simultaneously at the hub, and the second data burst from each user node arrives simultaneously at the hub. Further, the second data burst from each user node arrives immediately following the arrival of the first data burst from each user node.

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